Montgomery County Maryland
Department of Permitting Services

Division of
Land Development
Services

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Underground Stormwater Management Facility Plan Review Checklist

Sediment Control Permit No. _____

SUPPORTING INFORMATION (One Copy)

____ ____ ____ Maintenance Easement and Covenant Documents

____ ____ ____ Itemized Stormwater Management Construction Estimate.

____ ____ ____ Storm drain plans and computations for storm drains leading to the underground facility.

STORMWATER MANAGEMENT COMPUTATIONS (One Copy)

____ ____ ____ RCN determinations for CP_V: ultimate development (any existing developed off-site areas considered as existing condition).

____ ____ ____ Stormwater Management provided for one half of contiguous rights-of-way or planned non-state roads, and new construction within state road rights-of-way.

____ ____ ____ Time of Concentration (T_C) for CP_V computations: ultimate development (same policy on existing off-site areas as RCN determination).

____ ____ ____ Elevation-storage computations.

____ ____ ____ Elevation-discharge computations (provide equations and site references).

STORMWATER MANAGEMENT PLAN (One Copy)

A. **PLAN VIEW OF FACILITY AT SCALE OF 1" = 50' OR LESS (40', 30', ETC.)**

____ ____ ____ Existing and final contours (1' or 2' interval)

____ ____ ____ Existing and proposed improvements.

____ ____ ____ Delineation of outfall or downstream storm drain, control structure, storage facility and entire storm drain system.

____ ____ ____ Facility and manhole location to allow easy access and maintenance.

____ ____ ____ Outflow pipe, outlet protection (detail required), outfall channel.

____ ____ ____ Existing and proposed utility locations.

____ ____ ____ Maintenance access from public right-of-way, minimum width 12', maximum grade 15% - mechanically stabilized, 10% maximum without mechanical stabilization.

____ ____ ____ Maintenance easement (shall include: storage chamber, control structure, outfall, any related appurtenances, access points, minimum width allowance for repair work. Minimum 10-foot clearance around the facility.

B. **PROFILE OF ENTIRE SYSTEM AND ASSOCIATED DETAILS**

1. **GENERAL ITEMS**

____ ____ ____ Only pipes and concrete vaults allowed for storage chambers.

____ ____ ____ Circular pipes only.

____ ____ ____ All slopes, inverts, and dimensions.

____ ____ ____ Minimum 48” height of storage chamber and cross-overs.

____ ____ ____ Gage and corrugation size for metal pipe. Minimum 14 gauge.

____ ____ ____ Silt tight pipe or storage chamber.

____ ____ ____ Coupling band detail.

____ ____ ____ Grated, vented manholes on upstream and downstream ends of storage chamber for access, cleaning, and venting.

____ ____ ____ Maximum of 100’ chamber length between manhole access points.

____ ____ ____ For metal pipe, add note that the pipe ends must be matched and numbered, from the manufacturer.

____ ____ ____ Concrete manholes must be used at all HDPE pipe connections.

3. <u>CONTROL STRUCTURE (DETAILS REQUIRED)</u>

____ ____ ____ Reinforced concrete only (shop drawings for precast structures need approval of the design engineer and acceptance by MCDPS prior to fabrication). Add note to that effect on the plan.

____ ____ ____ Plan view with top slab removed.

____ ____ ____ Cross-sections each direction.

____ ____ ____ Top slab reinforcing detail.

____ ____ ____ Reinforcing details for all cast-in-place concrete structures.

____ ____ ____ Submit copy of structural computations if cast-in-place.

____ ____ ____ Weir crest and CpV and 10-year water surface elevations.

____ ____ ____ Orifice dimensions and location.

____ ____ ____ Orifice trash rack.

____ ____ ____ Protective coating for exposed metals.

____ ____ ____ Manhole access to both sides.

____ ____ ____ Maximum manhole step spacing of one foot on center. Access ladders must be used.

3. <u>OUTFALL PROTECTION (DETAIL REQUIRED)</u>

____ ____ ____ Size for 10-year storm – use SCS methodology.

____ ____ ____ Cross-section at end of channel in accordance with receiving section.

____ ____ ____ Outfall dimensions.

____ ____ ____ Slope – 0%

____ ____ ____ Median riprap size (d_{50}).

____ ____ ____ Thickness (2.0 x d_{50})

____ ____ ____ Approved filter cloth.

C. **MISCELLANEOUS ITEMS**

____ ____ ____ Inspector Checkoff List / Sequence of Construction

____ ____ ____ Stormwater Management Construction Specifications and General Notes.

____ ____ ____ Water quality considerations and construction runoff protection.

____ ____ ____ Loadings for structural design specified on plan (H-20 for vehicular travel areas).

____ ____ ____ Sealed by P.E. (Structural P.E. also where required) with signature and date.